DOCUMENT RESUME

ED 339 321 HE 025 106

AUTHOR Milem, Jeffrey F.
TITLE The Role of College Peer Groups and Faculty Reference Groups in the Development of Student Attitudes Toward Race. ASHE Annual Meeting Paper.
PUB DATE 1 Nov 91
NOTE 31p.; Paper presented at the Annual Meeting of the Association for the Study of Higher Education (Boston, MA, October 31-November 3, 1991).
PUB TYPE Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Attitude Change; Higher Education; Peer Influence; *Racial Attitudes; School Role; Sex Differences; Social Environment; Social Organizations; *Student Attitudes; Teacher Role
IDENTIFIERS *ASHE Annual Meeting

ABSTRACT

This study examined the role of colleges and universities, particularly faculty environment and student social groups, in shaping the attitudes of students about race. Specifically, the study analyzed the relative importance of the effects of the peer environment, the environment created by faculty, and student involvement in a variety of college experiences in the process of socialization as it relates to changes in student's attitude toward race. Data were derived from four earlier studies conducted between 1985 and 1989. Among the study's findings were the following: (1) women were more likely to be committed to issues of racial awareness than men, and race determined commitment level to these issues; (2) faculty environment and its effects did affect students' attitudes though more profound effects were facilitated by interactions with other students (e.g., membership in a fraternity or sorority served as a negative predictor of commitment to the goal of helping to promote racial understanding); and (3) college activities found to be negative factors included watching television and using a personal computer, while positive activities included participation in racial/cultural awareness workshops, enrollment in ethnic or women's studies classes, socializing with someone of a different racial/ethnic group, and discussion of political/social issues. Contains 17 references. (GLR)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED339321

The Role of College Peer Groups and Faculty Reference Groups in the Development of Student Attitudes Toward Race

A Paper Presented at the Annual Meeting of
the Association for the Study of Higher Education

Boston, Massachusetts
November 1, 1991

Jeffrey F. Milem

Higher Education Research Institute
Graduate School of Education
University of California, Los Angeles
Los Angeles, CA 90024-1521
(213) 825-1925

HE 025 106

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Jeffrey Milem

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

Texas A&M University
Department of Educational
Administration
College Station, TX 77843
(409) 845-0393

ASSOCIATION FOR THE STUDY OF HIGHER EDUCATION

This paper was presented at the annual meeting of the Association for the Study of Higher Education held at the Park Plaza Hotel & Towers in Boston, Massachusetts, October 31-November 3, 1991. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

Introduction

The role that colleges and universities play as socialization agents for the larger society has historically been of interest to many scholars of higher education. Many of the studies of college as a socialization agent and other studies which addressed the larger question of college impact have analyzed the role of reference groups in this process (Newcomb and Wilson, 1966, Chickering, 1969, Dey, 1988, Pascarella and Terenzini, 1991).

Much of this research focused on the effects of peer groups in shaping student's attitudes. While many of these early works recognized that faculty serve an important role as a reference group for students in the college environment, much of the influence of faculty was believed to be mediated by the influence of peers in the college environment. While it may be that faculty are actively involved in "setting the tone" on the campus in their contact with students in classes and through informal contact with students outside of the classroom, the effect of this contact is mediated through student contact with their peers.

One area in desperate need of further study is the role of the college environment in shaping student's attitudes toward race. As the 1980s came to a close in American higher education, we observed an increase in attention given to the topic of racial awareness and related attitudes and behaviors on many college campuses across the nation. News reports and anecdotal information indicated an increase in the number and intensity of incidents relating to acts of racial intolerance and prejudice on our college campuses. This happened in spite of the fact that many institutions of higher education have as one of their stated goals a commitment to develop in students an appreciation for diversity. The college environment is supposed to be one which actively encourages this diversity.

If we are to achieve this goal of providing educational environments which challenge students and develop in them an increased appreciation for and commitment to issues relating to diversity, then it is imperative that we better understand the factors which currently exist which

contribute to increases or decreases in student's commitment to issues and programs related to race.

The purpose of this study is to better understand the role of colleges and universities in shaping the attitudes of students. Specifically, this study will analyze the relative importance of the effects of the peer environment, the environment created by faculty, and student involvement in a variety of college experiences in the process of socialization as it relates to changes in student's attitude toward race.

Theoretical Perspective

The link between reference group theory and the study of college impact dates back to the initial development of the reference group concept. While Hyman has been credited with first introducing the concept of reference groups in 1942, one of the most widely cited studies illustrating the normative effects of peer groups was Newcomb's study of Bennington College women during the late 1930's (Singer, 1981). This pioneering study explained the observed change in political attitudes of these women resulting from their orientations to the college as a positive reference group (Newcomb, 1948). A follow-up study of these same women during the early 1960's suggested that the changes attributed to the reference group were likely to persist over time (Newcomb, 1968).

Kelley (1968) outlined two functions which reference groups serve. The *comparative* function exists when the referents serve as standards of comparison for an appraisal of some sort. The *normative* function exists when the referents serve as a source of the individual's norms, attitudes, and/or values.

Kemper (1968) suggested three functions of reference groups. An individual must please *normative reference groups* either because of her/his membership in them and her/his acceptance of their norms or because the group has power over the individual. Each group provides the individual with information about what is expected and what the consequences are for non-compliance. *Comparison reference groups* provide the individual with a frame of reference by

which she/he can test out her/his attitudes, beliefs, etc., or can learn a new set of skills. Role models can be important in this area by demonstrating to the individual how something is done which can in turn provide the individual with the skills which she/he lacks but desires. Finally, the individual attributes certain values to *audience reference groups* which the individual then tries to emulate. The audience group may or may not take notice of the individual, but she/he nevertheless attempts to attract their attention and gain rewards for them much as an actor performs for an audience.

Broadly conceived, the consequence of the normative influence of reference groups is conformity. In most cases, this relates to conformity in attitudes and behaviors. However, this conformity can also be used to understand other social processes including social mobility, acculturation, and changes in attitudes (Singer, 1981).

Reference groups and research on college impact

Despite Newcomb's pioneering study of Bennington College women, further interest in the study of the effects of reference groups or college peer groups did not emerge again in higher education until the decade of the 1960's. As might be expected, Newcomb emerged as one of the strongest proponents of the need to study the effects of peer influence on student outcomes. Newcomb and Wilson (1966) described what they believed to be the most important factors to be considered when assessing college impact. They believed the most important factor in determining the final outcome in college impact studies was what they labeled as selection. Their definition of selection appears to be synonymous with the variety of input characteristics which students bring with them to the college experience. The authors believed that the second most important factor in determining college impact was related to the influences of peers in the college environment. The authors believed that student attitudes were particularly susceptible to the influence of the peer environment.

This role was further elaborated in a later volume co-authored by Newcomb (Feldman and Newcomb, 1969a). An assumption inherent in their discussion of college impact was that colleges and universities serve the role as socializing agents for the larger society.

> As socializing institutions, colleges and universities have the task of influencing students so that they leave the campus with improved or different knowledge, skills, attitudes, and values. Designated socializing agents (primarily the faculty) act or behalf of the organization to train, develop, modify, or in some way 'act upon' the individuals (students) who enter it, in more or less formal ways. (pp. 227-228)

In discussing the importance of student sub-groups and peers, they acknowledged that while faculty may be the designated agents of socialization, students are likely to be directly responsible for much of the socialization which takes place. Chickering (1969) offered additional support for this view when he wrote that "A students most important teacher is another student." This does not minimize the role that faculty play in this process, but, rather points out that the influence of faculty is frequently mediated by the interactions which take place among students. In outlining his theory of college student development, Chickering acknowledged the importance of identifying and understanding the effects of peer influence when he wrote that: "The evidence clearly indicates that friends, reference groups, and the general student culture clearly have an impact on student development." He later wrote that "The force of friendships, reference groups, and the student culture is amplified as frequency and intensity of contact increase."

Based upon their review of research on college impact and on student peer group influence, Feldman and Newcomb proposed what they described as the seven functions of college peer groups.

> 1. As part of the intermediate stage between the family and larger post-college world, the college peer group may help the individual student through the crisis of achieving independence from home.
>
> 2. Under certain conditions.....the peer group can support and facilitate the academic-intellectual goals of the college.
>
> 3. The peer group offers general emotional support to the students; it fulfills needs not met by the curriculum, the classroom, or the faculty.

4. The college peer group can provide for the student an occasion for and practice in getting along with people whose background, interests, and observations differ from. his own.

5. Through value reinforcement, the peer group can provide support for not changing. Yet, it can also challenge old values, provide intellectual stimulation, and act as a sounding board for new points of view, present new information and new experiences to the student, help to clarify new self-definitions, suggest new career possibilities, and provide emotional support for students who are changing.

6. The peer group can offer an alternative source of gratification and of positive self-image, along with rewarding a variety of non-academic interests, for students who are disappointed or not completely successful academically. Friends and social ties may also serve to discourage voluntary withdrawal from college for other than academic reasons.

7. College peer group relations can be significant to students in their post-college careers–not only because they provide general social training, but also because of the development of personal ties that may reappear later in the career of the former student. (pp. 236-237)

Given the important role that peers have in affecting the educational outcomes of the student, it is important to consider both why and how these groups come into being. Chickering provides perhaps the most succinct explanation for why students are attracted to these peer groups.

> Human beings are strongly prompted to establish social ties for two reasons. First, secure social ties provide a dependable basis for a consistent and stable self-picture, a firm sense of identity.....Second, social ties provide both instrumental and emotional support as the business of living is carried out. (p. 226)

In *College Peer Groups*, Newcomb offered an explanation as to how these groups come into being when he described three conditions which facilitate peer group formation. *Precollege acquaintances* generally apply to groups formed in high school which carry over into the college experience. While these groups don't often carry over into the college years, those that do are more likely to reinforce attitudes and values than to mediate new ones acquired through the college experience. *Propinquity* refers to the fact that essentially the closer you are to people, the more likely you are to develop friendships with them. Finally, students are more likely to become involved with people and groups of people with which they share *similar attitudes and interests*. This assertion is echoed by other researchers including Guskin (1970) who wrote that: "friends are

selected on the basis of the actual and perceived similarity of attitudes, interests, and values." (p.133)

Newcomb described what he believed to be four conditions for peer group influence. These included (1) the *size* of the groups, (2) the *homogeneity* of the group, (3) the *isolation* of the group, and, (4) the *importance to individuals of group-supported attitudes*.

Newcomb's argument concerning group size is that smaller groups tend to bring about stronger effects on attitudes. He does not discount the effects of larger groups, particularly when the smaller group is a part of the larger group. The attitudes developed by the smaller group combined with the strength of support of the larger group can make for an effective and potent combination. However, when the smaller group and its attitudes are in conflict with the larger group, the smaller group can often serve to insulate its members from the effects of the larger group norms.

In regard to the homogeneity of the group, generally speaking, groups which are more homogeneous in terms of age, sex, social class, and/or religious beliefs (racial/ethnic background could be added here) contribute to effective peer group influence primarily because of the homogeneity of attitudes that tend to correspond with these other similarities. People with similar backgrounds and similar experiences are more likely to share similar attitudes.

The relative isolation of a group from other groups having differing views and attitudes serves to strengthen the belief that the group's views are "right." This may also help to explain the phenomenon described above where group membership can serve to insulate its members from the influences of the larger culture. Even though the smaller group deviates from the norms of the larger group, if it can successfully isolate itself from the larger group, the small group and its attitudes may remain in tact.

Finally, the greater the importance to the individuals in the group of the attitudes for which the group stands, the greater the solidarity of the group. Conversely, when identification by the individual shifts away from the group and its prevailing attitudes, the group's influence is diminished.

In describing the dynamics of the normative function of reference groups on campuses, Feldman and Newcomb stated that:

> students have mutual and reciprocal influence on each other. In the interaction they develop consensual and shared sets of expectations regarding each others' behavior and regarding important aspects of their common environment. These consensual and shared expectations–known as norms and standards–form the basis of the student peer group's power over individual members. (p. 240)

More recent research on college impact

The basic question of research on college impact is *under what conditions do what kinds of students change in what ways?* (Feldman and Newcomb, 1969a)) The conditions that they describe can be defined as the aspects of the college environment which affect the outcomes of interest in these studies. Astin believes that these are critical in that they provide they researcher with an "interpretative frame of reference" which can be used to explain the observed changes in outcome variables (Astin, 1970a, 1970b, 1977, 1991).

One of the major weaknesses of most of the early studies of college impact, including the majority of studies which dealt with peer effects, was that they did not really measure impact. Instead, they were studies of change in students over time. While there were observed changes in the populations studied, there was no way to truly assess whether the changes could really be attributed to the college environment.

This was true for primarily two reasons. Both stem from the fact that these studies were generally studies of students at single institutions. As a result, the studies had no way to adequately control for the input characteristics of the students involved. This presents problems of self-selection given that particular colleges tend to attract particular types of students. There was really no way to determine whether the differences observed were a result of maturational effects or of the result of attendance at the college or university.

In addition, even if there had been controls for the input characteristics of the students involved, there was no way to directly attribute these changes to the college environment given the fact that the environment was not a variable. In these single institution studies, the environment

was a constant. In the absence of data from multiple institutions, there was no way to determine whether the observed changes were unique to the particular campus being studied. (see Astin, 1970a, 1970b, 1977, 1991).

The first large scale study that included adequate controls for input characteristics and an environmental variable for analysis was conducted by Trent and Medsker (1968). The study compared college attenders to non-attenders, hence, providing a dichotomous measure of the college environment. By comparing high achieving non-attenders to college attenders, Trent and Medsker were able to better distinguish change which resulted from maturational effects from change which could be uniquely attributed to college environment. In this study student experiences were not measured, but, rather were implicitly assumed to be different from those who did not attend college.

While this study was an improvement over previous college impact studies, it, too, was not without weaknesses. By grouping the entire range of college and university types into one measure, it was impossible to determine what effects could be uniquely attributed to different college types. By doing this, the incredible variability of college types was ignored.

The college impact studies of Alexander Astin are among the most widely cited in recent years. His Input-Environment-Output (I-E-O) model of studying college impact provides for adequate control of input characteristics and for isolating the effects of a host of environmental variables (see Astin, 1970a, 1970b, 1977, 1991). Step-wise multiple regression techniques are used in the model. The effects of input characteristics are controlled for by entering the variables in blocks in temporal sequence in the order in which they are believed to have occurred. Environmental variables enter the equation only after all relevant input characteristics related to the outcome have been allowed to enter the regression equation. While these studies lack a control group of non-attenders, Astin is able to compensate for this by measuring the magnitude of exposure to the college environment. The rationale he offers for this method is that "if certain outcomes are facilitated by the experience of attending college, the likelihood of such outcomes should be greater for those students who have the greatest exposure to the college environment."

The environmental measures included in these analyses include measures of different environments both between and within institutions. Between institution differences are measured by a host of variables which include measures of selectivity, size, control type, funding, expenditures, faculty/student ratios, region, level of federal support, etc. Based upon differing effects of these variables and the distribution of student types and backgrounds among these differing institutions, peer effects are often inferred.

The environmental measures of within institution differences include measures of student involvement with programs, activities, and/or ideas (i.e., majors). These involvement based measures have helped to describe student experiences by identifying and emphasizing institutional sub-environments and student sub-cultures. However, while these variables identify the existence of these groups, they do not directly measure the normative messages and expectations which are communicated in these groups. Again, this must be inferred by the researcher.

When researchers rely on structural characteristics to measure the college environment, they introduce a great deal of imprecision into the analysis. As a result, it is easier to misinterpret their findings, and, it is possible that they underestimate the true effects of the college environment. By grouping institutions into broader structural variables, the variability within these groupings is ignored. Much of this variability may result from differences in peer environments from campus to campus.

There have been a few recent attempts to more directly measure and assess the impact of student peer groups. Dey's (1988) study of the effects of the college environment on political views is one such study. An array of earlier studies had indicated the effect of the college environment in making students more politically liberal as a result of attending college. This trend had remained relatively constant over time.

In an analysis of trends data on college freshmen, Dey observed that entering students were increasingly more likely to characterize their political views as being moderate or conservative. In addition, trends data on students four years after entering college indicated that increases in student

liberalism were not as marked as in previous years. Dey hypothesized that this might be the result of the effects of a peer environment which was becoming increasingly more conservative.

In order to test this hypothesis, he constructed three factors related to political attitudes for which he had both pre-test and post-test information. In addition to the normal environmental measures used in college impact research, he also constructed an institutional measure of political liberalism for each college represented in the sample. After the input characteristics entered the regression equation, none of the structural characteristics entered. Schools which fell within the lowest quintile of the measure of the peer environment indicated a negative relationship with liberalism. The other measures of the environment which entered were measures which addressed the importance of the students' social system and peer environment. Dey concluded that the changing characteristics of students and the peer environment may have resulted in college producing a moderating effect, rather than a liberalizing effect on student political attitudes.

Dey recognized that these results should be viewed with caution. In particular he acknowledged that the peer environment measure used in the analysis was a rough approximation of the normative messages a student might experience in the college environment. In addition, as the size of the institution increases, the measure of the peer environment becomes less representative due to the variety of normative peer groups which can exist on college campuses.

Research on the impact of college on racial attitudes

Until recently little longitudinal analysis has been done on what effect different college environments have on student's attitudes toward race. The exception is a recently completed study by Sylvia Hurtado (1990). Hurtado's analysis was done analyzing differences between African-American, Chicano, and White students. She found that racial tension on campus was positively associated with increases in student's interest in promoting racial understanding. Also, student perceptions of institutional commitment to diversity were positively associated with the goal of promoting racial understanding for Chicano and White students. White students who perceived

that most faculty at their institutions were sensitive to the issues of minority students also showed greater increases in their commitment to promoting racial understanding.

In addition to issues of campus climate, there were a number of student behaviors which were significant in increasing student's commitment to promoting racial understanding. These included socializing with someone of a different racial group, discussing issues related to race and ethnicity, attending racial awareness workshops, enrolling in ethnic studies workshops, and participating in campus demonstrations. In addition, time spent talking with faculty outside of class, being a guest in a professor's home, and time spent in student organizations and clubs were also positive predictors of increased commitment to this goal. Being involved as a member of a fraternity or sorority were shown to be negatively related to increased commitment to the goal.

Hurtado's study is ground breaking in that it provided the first in-depth longitudinal analysis of the process of student socialization as it relates to racial attitudes. However, she did not directly analyze the effect of the student peer environment or the environment created by faculty in the socialization process of college students. The goal of this study is to do just that, to better understand the role of the college peer environment and the faculty environment at the college is the shaping student's attitudes toward race.

Data set

Data used in this study were collected as a part of two recent national surveys conducted by the Higher Education Research Institute at UCLA. Student data is derived from the 1989 Follow-Up Survey (FUS) of the 1985 entering freshmen class conducted jointly by the Cooperative Institutional Research Program and the Higher Education Research Institute. Data for faculty came from a 1989 survey of college and university faculty from the same institutions represented in the student sample. The sample contains only students who enrolled in four year institutions. Students who attended community colleges were excluded from the analysis. Thus, the sample provides measures of entering student characteristics, college experiences, and faculty attitudes and opinions.

Measures of the peer environment were computed by aggregating student responses at the institutional level on selected attitude and opinion items from the 1985 freshmen survey. Measures of the faculty environment were developed by institutionally aggregating faculty responses to similar items from the faculty survey instrument. A sub-sample of all cases was created which placed upper and lower limits by institution for student responses. This was done for two reasons. First, the lower limits were used so that an individual student's response would not adversely effect the student aggregate measures. The same rationale was used for the faculty aggregate measures. Second, upper limits were used so that one (or more) institutions would not have an adverse effect on the analyses due to the shear numbers of student respondents from a particular institution. These procedures yielded a final sample of approximately 7500 for the analyses.

Methodology

The data was analyzed utilizing the I-E-O model as described by Astin (1970a, 1970b, 1977, 1991). This method of studying college impact provides the researcher with adequate controls for the effect of input characteristics and environmental variables on the outcomes of interest. Step-wise hierarchical multiple regression techniques are used in the model. The effects of input characteristics are controlled for by entering the variables in blocks in temporal sequence (or in the order in which they are believed to occur). Environmental variables enter the equation only after all relevant input characteristics which are related to the outcome have been allowed to enter the equation. By controlling first for the effects of the input characteristics, the researcher can attribute with greater confidence other observed changes in the outcome to the environmental variables which enter as predictors of the outcome.

Data variables

Three dependent variables were chosen for inclusion in this study. They included: (1) agreement with the statement "Busing is OK if it helps to achieve racial balance in the schools"; (2) the importance of the personal goal "Helping to promote racial understanding"; and, (3) agreement

with the statement "Racial discrimination is no longer a major problem in America." The two opinion statements had four response categories which included strongly disagree, disagree somewhat, agree somewhat, and strongly agree. The personal goal statement also had four response categories which included not important, somewhat important, very important, and essential.

The independent variables chosen for use in the analysis were selected primarily for their value as identified by the studies mentioned earlier. Other variables were selected to test their value in predicting each of the dependent variables. The independent variables were entered in blocks in the regression analysis to approximate the temporal sequence in which they were believed to have occurred for this sample.

Block I variables included measures of various background characteristics of the students in the sample. Dichotomous variables for race, sex, religious background, and whether or not the respondent was a citizen were included in this block. Also included were continuous variables measuring age, parental education, and parental income. The busing question and the goal statement measuring commitment to promoting racial understanding both had pretest measures included on the freshmen survey and were placed in the first block of variables. The racial discrimination question did not have a pretest. Other items from the freshmen survey were allowed to enter the regression equation to serve as proxies for the missing pretest.

Block II variables included dichotomous variables indicating the student's living arrangements during their first year of college. These included whether or not the student had lived on campus, at home, or in another private room or residence off-campus.

Block III variables included the aggregate measures of the peer and faculty environment at the institution. These included the aggregate measures of the two pretests mentioned above as well as aggregates of: agreement with the statement "Individuals can do little to change society"; and, commitment to the personal goals of "Influencing the political structure", "Influencing social values", "Helping others who are in difficulty", and "Participate in community action programs". In addition, aggregate measures of socioeconomic status and political view were included. The

faculty aggregates included faculty commitment to the goals of: "Influencing the political structure", "Influencing social values", "Helping others who are in difficulty", and "Helping to promote racial understanding." An aggregate measure of faculty agreement with the statement "Racial discrimination is no longer a major problem in America" was also included. Finally, an aggregate measure of the political view of faculty at the institution was included in this block of the analysis.

Block IV variables included what could be described as the structural measures of the college environment. These included dichotomous measures of institutional type: public university, private university, public four year college, private four year college, nonsectarian four year college, Catholic four year college, Protestant four year college, all-male college, and all-female college. Continuous variables measuring selectivity (average SAT score of entering class), percentages of enrollments of various racial/ethnic groups, and percentages of degrees awarded in various fields were also included in this block.

Block V variables included various measures of involvement while in college. Included were dichotomous measures of participation in campus demonstrations, election to student office, enrollment in ethnic studies classes, enrollment in women's studies classes, attendance at racial awareness workshops, and membership in a fraternity or sorority. Continuous measures of involvement in discussions of racial/ethnic issues, socializing with someone of a different race, and discussion of political/social issues were included in this block. Measures of the individual student's level of student/student interaction and the level of student/faculty interaction were included. Finally, continuous variables measuring how students spent their time were also included in this last block of variables.

Three hierarchical step-wise regression analyses were conducted for this study. This included one for each of the dependent variables mentioned earlier in this section.

Results

Outcome 1–Personal goal: Helping to promote racial understanding

Twenty-three variables entered the regression equation as significant predictors of the 1989 goal (see Table 1). In the end, seventeen of these variables remained statistically significant ($p \leq .05$). The final R for the regression was .62 yielding an R^2 of .39. This regression equation explained more of the variance in the dependent variable than the other two outcomes analyzed.

As would be expected, the most significant predictor of the 1989 goal was the pretest included in the 1985 freshmen survey. Other input variables to enter as positive predictors of the outcome included being female, level of mother's education, having a liberal political view, being African-American, and supporting the view that busing is OK to achieve racial balance in the schools. The only input characteristic to enter as a negative predictor of the final outcome was being white.

Level of mother's education was no longer statistically significant when the effects of the socioeconomic background of peers was controlled for later in the regression equation. This might indicate that the effects of socioeconomic status are stronger when an individual is in an environment with peers from higher SES backgrounds than merely when one comes from a higher SES background. Liberal political view also was no longer statistically significant at the end of the regression equation. However, the decline in this variable was not as dramatic as the changes in the effects of mother's education in that its effects were gradually diminished throughout the regression. This would indicate that the effects of political view are best explained by other variables included in the analyses.

The only variable from the second block measuring the living arrangements of students to enter the equation was the variable indicating that the student had lived at home during the first year of college. After entering as a negative predictor of the outcome, it also gradually diminished in importance and later became statistically non-significant. This might indicate that while living at

home provides the student with decreased exposure to the effects of the college environment, this apparently can be compensated for through involvement in other college experiences and activities.

Three variables measuring the peer environment and the faculty environment at the institution entered the equation as significant predictors of the outcome. The peer mean for socioeconomic status entered as a positive predictor of the dependent variable. It's standardized beta coefficient (Beta) dropped significantly when the peer mean for the goal of promoting racial understanding entered the regression equation at the next step and dropped again when the first of the college experience/activity measures entered the equation in block V. The effect of this college activity variable will be discussed in greater detail later in this section. The peer mean for SES then gradually dropped out of statistical significance.

As was mentioned, the second of the aggregate measures to enter was the peer mean for the goal of helping to promote racial understanding. It entered the equation as a positive predictor of the outcome. The third and final variable to enter in the third block of variables was the faculty aggregate measure for agreement with the view that racial discrimination is no longer a major problem in America. As would be expected given the wording of the statement, this variable entered as a negative predictor of the outcome. This would indicate that the environment as defined by the peer group and by faculty facilitate commitment to the personal goal of helping to promote racial understanding. However, both of these variables were no longer statistically significant when the item measuring the level of student involvement in discussing racial/ethnic issues entered the regression equation.

Only two of the variables in block IV measuring structural characteristics entered the regression equation. These included percentage of alien students enrolled at the institution as a positive predictor and size of the institution as a negative predictor of the outcome. The effects of both gradually diminished in the equation as other variables entered and became statistically non-significant.

A number of the college experience/activity measures entered as significant predictors of the outcome variable. As was mentioned, the first of these variables to enter was the frequency with

which students had discussed racial/ethnic issues. This variable served as the second most significant predictor of the outcome. As will be discussed later, it also serves as a predictor of the two other outcome variables. This suggests that while the peer environment and the faculty environment serve important roles in setting the tone for attitude change in students, their effects are indirect and occur as a result of discussions students have with their peers.

Other variables to enter as positive predictors of the outcome were attending racial/cultural awareness workshops, socializing with someone of a different racial/ethnic group, participating in campus demonstrations, enrollment in ethnic studies courses, discussing political and social issues, and the degree of interaction between the student and faculty members at the institution.

Negative predictors of the outcome included hours per week spent watching television and using a personal computer. Students engaged in both of these activities would appear to have fewer opportunities to engage in the earlier mentioned activities and would appear to have less exposure to the effects of the peer environment. Additionally, many critics have argued that television serves to reinforce a number of negative stereotypes of students. Hence, watching a lot of television could cause students to be more conservative in their attitudes toward race and racial issues.

Finally, membership in a fraternity or sorority also served as a negative predictor of the outcome. This finding might indicate that these groups represent a peer group with attitudes and values which differ from the larger environment. This function would be similar to the role described by Newcomb of smaller groups providing insulation from the effects of the larger group for smaller group members. In addition, these students may be less likely to be exposed to the activities listed above as positive predictors of the dependent variable.

The most interesting of the independent variables which did not enter the equation was the aggregate measure of faculty commitment to the goal of helping to promote racial understanding. While it is significantly correlated with the outcome (simple r of .18), it fails to enter the regression equation. This appears to happen for primarily two reasons. First, the Beta drops significantly when the student peer mean enters for the same item. Second, it is highly correlated with the

aggregate faculty opinion which did enter the equation (-.54). This would indicate that the items are similar in what they measure resulting in collinearity between the variables. In this analysis, the aggregate opinion best fit the equation. If the opinion were to be excluded from the analysis, the faculty goal aggregate would most certainly enter as a significant positive predictor.

Outcome 2–Busing is OK if it helps to achieve racial balance in the schools

Only twelve variables entered the regression equation as significant predictors of the 1989 view "Busing is OK if it helps to achieve racial balance in the schools." In the end, all twelve variables remained statistically significant ($p \leq .05$). The final R for the regression was .45 yielding an R^2 of .21 (see Table 2).

Each of the input variables to enter the regression entered as a positive predictor of the outcome. As was expected, the 1985 pretest of the view entered the analysis first. This was followed by commitment to the goal of promoting racial understanding, liberal political view, mother's education, being Mexican-American/Chicano, and being female.

None of the variables measuring first year living arrangements entered the equation.

During the third block of the regression, three of the peer measures entered as positive predictors of the outcome. These included a politically liberal peer environment, a peer environment of higher SES students, and the aggregate measure of agreement with the 1985 view of "Busing is OK if it helps to achieve racial balance in the schools."

As with measures of the living arrangements of students, no measures of the structural characteristics of institutions entered the regression equation.

Two college experience/activity measures entered the equation as positive predictors of the outcome. The first to enter again was degree of student involvement in discussing racial/ethnic issues. The next to enter was participation in campus demonstrations. Hours per week using a personal computer again entered the equation as a negative predictor of the dependent variable.

None of the faculty aggregate measures entered the regression equation as significant predictors of the outcome. Those which would be expected to enter dropped from significance

when the peer measures entered the equation. In addition, the student/student interaction and the student/faculty interaction measures also did not emerge as significant predictors. These measures were only weakly correlated with the outcome measure (-.03 and -.07 respectively).

Outcome 3–Racial discrimination is no longer a major problem in America

Eighteen variables entered the regression equation as significant predictors of the 1989 view "Racial discrimination is no longer a major problem in America." In the end, thirteen of these variables remained statistically significant ($p \leq .05$). The final R for the regression was .38 yielding an R^2 of .15 (see Table 3). This was the least amount of variance explained among the equations predicting the three dependent variables.

One limitation of the analysis of this dependent variable is the absence of a pretest. However, as was mentioned earlier, proxies for the pretest were included in the first block of the analysis. It is important to note that given the wording of the dependent variable, items which serve as negative predictors of the outcome would indicate greater racial awareness and sensitivity. Likewise, items which serve as positive predictors of the outcome in this case would indicate lessened racial awareness and sensitivity.

Degree of commitment to the goal of helping to promote racial understanding entered as the first negative predictor of the outcome. Other negative predictors included having a liberal political view, being female, father's education, being Jewish, being non-religious, and being African-American. Positive predictors were being white and students who reported being born-again Christians in 1985. Father's education, being Jewish, and being non-religious all dropped from statistical significance later in the regression equation. As with mother's level of education in the first analysis, father's education dropped from significance once the peer measure of socioeconomic status entered the equation. Both measures of religious affiliation gradually diminished and dropped from statistical significance.

The only variable to enter regarding the living arrangements of students was the variable indicating that the student lived on campus. This variable also dropped from significance when the

peer measure of SES. There is also a moderate correlation between peer SES and living on campus (.26) indicating that living on campus is more prevalent in institutions with students from higher socioeconomic backgrounds and the effects of this living arrangement may be as much a function of SES as of living on the campus.

Two measures of the peer environment entered as negative predictors of the dependent variable. These included the peer mean for socioeconomic status and the peer mean for liberal political views. Liberal political views dropped from significance after the entry of the variables measuring college experiences and activities entered the regression equation. The faculty aggregate for the parallel item from the faculty survey entered as a positive predictor of the outcome variable. While its effects diminished with the entry of the peer measures and the college experiences/activities items, it did remain statistically significant in the equation.

None of the variables measuring the structural characteristics of the institutions attended by the students entered the regression equation.

Finally, four of the variables measuring college experiences and activities entered the regression equation as negative predictors of the dependent variable. These included involvement in discussion of racial/ethnic issues, participation in campus demonstrations, attend racial/cultural awareness workshops, and enrollment in women's studies courses. After controlling for the effects of the previous four variables, the level of student/student interaction emerged as a significant positive predictor of the outcome. This would seem to indicate that as student to student contact increases among those students not participating in programs designed to increase awareness and heighten sensitivity, students become less sensitive to issues of racial discrimination.

Discussion and implications

As we look to the results of theses analyses, we are able to learn a great deal regarding the role of the college environment, and the peer and faculty environment in particular, in the development of racial awareness and sensitivity among college students. Each block of variables included in the analysis provides clues as to what colleges and universities might do to better facilitate increased awareness and sensitivity among their students.

The first block of variables included measures of entering student characteristics which are related to each of the outcomes. These findings indicate that women are more likely to be committed to issues of racial awareness than are men. Race also is a factor in determining commitment to these issues. Whites are less likely than other racial groups to be committed to these issues, while African-American and Mexican-American/Chicano students are more likely to be committed to issues of racial awareness and sensitivity. These findings suggest that there are particular groups which could be targeted by colleges and universities for programmatic and curricular interventions designed to increase sensitivity and awareness in these areas.

In addition to these findings, it is apparent that political ideology is highly correlated with commitment to these issues. While a measure of parental education enters each of the regressions, the effects of parental education seem to be better explained as aggregate measures of college environments. College environments characterized by students who come from highly educated families serve as positive predictors of the outcomes studied.

Regretfully, there are no conclusive results regarding the role of living arrangements as they relate to this set of outcome variables. While the findings of earlier studies of college impact would suggest that students who live on-campus would have greater exposure to the effects of the peer and faculty environment and would have greater potential for involvement in experiences and activities while in college which serve to heighten sensitivity, this is not supported by the results of these analyses.

While not as dramatic as was expected, there is evidence to support the role of the peer and faculty environments in predicting the outcomes included in this study. In part, this may be due to the fact that the aggregate measures used are only rough approximations for the peer and faculty environments on individual campuses. If more precise measures of these environments can be developed, we might expect to find the magnitude of the peer and faculty effects to increase . In spite of this limitation, those peer and faculty measures which do enter the equation warrant further discussion.

Environments which are characterized by students from higher socioeconomic backgrounds appear to consistently facilitate increased commitment to issues of racial awareness and sensitivity. In addition, aggregate measures of peer attitudes and values emerge as predictors of each of the outcome variables. While several remain significant as predictors, their effects are diminished once the variables measuring college experiences and activities enter the equation.

Some measures of the faculty environment also enter the equations. However, they either drop from significance or have diminished effects when the variables measuring college experiences and activities enter the equation. In some cases, the faculty aggregates do not enter the equation at all after the student aggregates enter. These findings suggest that the faculty environment and its effects are, in fact, mediated by the peer environment. While faculty may be actively involved in "setting the tone" on campus, more profound effects are facilitated through the interactions which students have with other students.

With only two exceptions, no structural characteristics entered the regression equations as significant predictors of the outcomes. Past research on college impact has shown that many of these structural characteristics do serve as significant predictors of a host of student outcomes. The findings from this study suggest that these previous findings may have been better explained through an analysis of the effects of the peer and faculty environment. The structural variables may have served as proxies for measures of the peer environment in these earlier studies explaining their significance in predicting student outcomes.

The findings regarding the effects of college experiences and activities indicate that there are a number of undergraduate experiences which contribute to increased commitment to issues of racial awareness and sensitivity. First and foremost among these is the frequency with which students engage in discussions of racial/ethnic issues. Other positive predictors included participation in racial/cultural awareness workshops, enrollment in ethnic or women's studies classes, socializing with someone of a different racial/ethnic group, discussion of political/social issues, and participation in campus demonstrations.

In addition, there were college activities which served as negative predictors of the outcomes. These included time spent using a personal computer and time spent watching television. Both of these findings suggest that these may be students who are somewhat isolated from the effects of the college environment and who are less likely to be involved in the activities described above which positively predict the outcomes.

Finally, membership in a fraternity or sorority served as a negative predictor of commitment to the goal of helping to promote racial understanding. As stated earlier, these student groups may represent smaller groupings of students with attitudes and values which often run counter to the prevailing attitudes of the larger group. These smaller groups can function to isolate or protect their members from the effects of the larger groups.

There are a number of limitations in this study which warrant mentioning. First, as previously discussed, the aggregate measures of the peer and faculty environment are only rough approximations of these environmental variables. There is a need to develop and refine these variables so that more precise measures can be included in future analyses. The second limitation involves a related concern. As Dey (1988) stated in his paper, measures of the peer environment become less precise as the size of the college population increases. Smaller groups tend to more homogeneous allowing more precise measures of the environment. However, larger groups tend to be much more heterogeneous, making it more difficult to measure the peer environment with precision. Finally, the dependent variables used in this analysis are not optimal measures of student racial attitudes. There is further complication in the absence of a pretest for one of the

items. While there is still much work to be done to improve this area of research, the study does offer useful information to faculty, administrators, and students in higher education.

These findings suggest that faculty do have an important role in the development of student's attitudes toward race. While this is facilitated by the "tone" which faculty help to create on the campus, the most important contribution that faculty make, or have potential to make, is in what they do in the classroom. Through the design and implementation of curricular and pedagogical methods which provide for discussion among students pertaining to these issues, faculty can assist in the socialization process of their students and aid in the development of their student's interest in and commitment to race-related issues.

For administrators and students committed to issues of racial awareness and sensitivity, it seems apparent that the presence of co-curricular activities designed to promote these interactions and discussions are an integral and crucial part of the college experience. While faculty and administrators can work diligently to facilitate these outcomes, it is important to remember Chickering's comments written over two decades ago "A students most important teacher is another student."

References

Astin, A.W. (1970a). The Methodology of Research on College Impact, Part 1. *Sociology of Education, 43,* 223-254.

Astin, A.W. (1970b). The Methodology of Research on College Impact, Part 2. *Sociology of Education, 43,* 437-450.

Astin, A.W. (1977). *Four Critical Years.* San Francisco: Jossey-Bass.

Astin, A.W. (1991). *Assessment for Excellence: The Philosophy and Practice of Assessment and Evaluation in Higher Education.* New York: Macmillan.

Chickering, A.W. (1969). *Education and Identity.* San Francisco: Jossey-Bass.

Dey, E.L. (1988). *College Impact and Student Liberalism Revisited: The Effect of Student Peers.* Paper presented at the 1988 Annual Meeting of The Association for the Study of Higher Education. St. Louis Missouri.

Feldman, K.A., and Newcomb, T.M. (1969a). *The Impact of College on Students, Volume 1.* San Francisco: Jossey-Bass.

Guskin, A.E., and Guskin, S.L. (1970). *A Social Psychology of Education.* Reading, Mass: Addison-Wesley.

Hurtado, S. (1990). *Campus Racial Climates and Educational Outcomes.* Ann Arbor: University Microfilms International. Order # 9111328.

Hyman, H.H. and Singer, E. (1968). *Readings in Reference Group Theory and Research.* New York: The Free Press.

Hyman, H.H., and Wright, C.R. (1978). *The Enduring Effects of Education.* Chicago: University of Chicago Press.

Newcomb, T.M., and Wilson, E.K. (ed.) (1966). *College Peer Groups.* Chicago: Aldine–National Opinion Research Center.

Newcomb, T.M. Student Peer Group Influence. in Sanford, N. (1962) (ed.) *The American College.* New York: John Wiley and Sons.

Newcomb, T.M. The General Nature of Peer Group Influence. in Newcomb, T.M., and Wilson, E.K. (ed.) (1966). *College Peer Groups.* Chicago: Aldine–National Opinion Research Center.

Pascarella, E.T. and Terenzini, P.T. (1991). *How College Affects Students: Findings and Insights from Twenty Years of Research.* San Francisco: Jossey-Bass.

Singer, E. Reference Groups and Social Evaluations. in Rosenberg, M. and Turner, R.H. (1981) *Social Psychology: Sociological Perspectives.* New York: Basic Books.

Trent, J.W., and Medsker, L.L. (1969). *Beyond High School.* San Francisco: Jossey-Bass.

Table 1
Regression Predicting Goal: Promote Racial Understanding (N=7214)

Variable	Step	Standardized Beta Coefficients			
		Simple r	At Step 1	At Entry	At Final Step
Block I Variables					
Pretest: 85 Goal	1	43	43	43	25
Race: White	2	-23	-14	-14	-07
Sex: Female	3	09	09	09	05
Mother's Education	4	11	07	08	00
Liberal Political View	5	15	07	06	02
Race: African American	6	22	14	07	07
85 View Busing OK	7	14	06	04	03
Block II Variables					
Live at Home	8	-08	-05	-04	01
Block III Variables					
Peer Mean: SES	9	17	12	12	03
Peer Mean: Goal-Promote Racial Understanding	10	28	17	07	-01
Faculty Mean: Racial Discr. no Longer a Problem	11	-17	-12	-05	-01
Block IV Variables					
% Alien Enrollment	12	07	05	03	00
Size: Large	13	-11	-07	-04	00
Block V Variables					
Discussed Racial Issues	14	46	38	34	22
Attended Racial Awareness Workshop	15	35	27	14	09
Socialized w/ Someone of a Different Race	16	26	20	10	07
Participated in Campus Demonstrations	17	31	23	09	07
Enrolled in Ethnic Studies	18	28	22	08	08
Hours/Week: Watching TV	19	-15	-11	-06	-06
Discussed Political/Social Issues	20	33	25	07	07
Amount Student/Faculty Interaction	21	17	14	05	05
Frat/Sorority Member	22	-09	-06	-04	-04
Hours/Week: Using a PC	23	06	03	-03	-03
	R=.62	R^2=.39			
Variables Not Entering					
Faculty Mean: Goal-Promote Racial Understanding		18	11		01

Source: 1989 Follow-Up Survey of Entering Class of 1985, 1989 Survey of College and University Faculty: Higher Education Research Institute, UCLA

Table 2
Regression Predicting View: Busing is OK to Achieve Racial Balance (N=7016)

Variable	Step	Standardized Beta Coefficients			
		Simple r	At Step 1	At Entry	At Final Step
Block I Variables					
Pretest: View 85	1	40	40	40	36
Goal 85: Promote Racial Understanding	2	18	11	11	06
Liberal Political View	3	15	09	08	04
Mother's Education	4	10	08	06	03
Race: Chicano/Mexican American	5	05	04	05	04
Sex: Female	6	07	04	04	03
Block II Variables					
None Entered					
Block III Variables					
Peer Mean: Liberal Political View	7	17	13	09	04
Peer Mean: SES	8	12	11	06	06
Peer Mean: Busing OK to Achieve Racial Balance	9	18	10	04	04
Block IV Variables					
None Entered					
Block V Variables					
Discussed Racial Issues	10	15	13	07	06
Participated in Campus Demonstrations	11	15	12	05	05
Hours/Week: Using a PC	12	-01	00	-04	-04
	R=.45	R^2=.21			
Variables Not Entering					
Faculty Mean: Goal: Promote Racial Understanding		18	07		01
Faculty Mean: Racial Discr no Longer a Problem		-18	-09		00
Amount of Student/Faculty Interaction		-07	04		01
Amount of Student/Student Interaction		-03	02		-01

Source: 1989 Follow-Up Survey of Entering Class of 1985, 1989 Survey of College and University Faculty: Higher Education Research Institute, UCLA

Table 3
Regression Predicting View: Racial Discrimination is No Longer a Problem (N=7116)

Variable	Step	Simple r	Standardized Beta Coefficients At Step 1	At Entry	At Final Step
Block I Variables					
Goal 85: Promote Racial Understanding	1	-20	-20	-20	-08
Liberal Political View	2	-15	-12	-12	-06
Race: White	3	14	10	10	06
Sex: Female	4	-12	-11	-10	-08
Father's Education	5	-08	-07	-08	-02
Born Again Christian	6	07	07	05	02
Religion: Jewish	7	-07	-06	-05	-02
Religion: None	8	-07	-06	-05	-01
Race: African American	9	-14	-10	-06	-04
Block II Variables					
Live on Campus	10	-06	-05	-04	-01
Block III Variables					
Peer Mean: SES	11	-16	-14	-12	-05
Faculty Mean: Racial Discr. no Longer a Problem	12	17	15	08	04
Peer Mean: Liberal Political View	13	-18	-15	-05	00
Block IV Variables					
None Entered					
Block V Variables					
Discussed Racial Issues	14	-27	-23	-18	-15
Participated in Campus Demonstrations	15	-21	-18	-08	-08
Enrolled in Womens Studies	16	-18	-16	-05	-05
Amount Student/Faculty Interaction	17	-01	00	05	06
Attended Racial Awareness Workshop	18	-21	-17	-06	-06
	R=.38	R^2=.15			

Source: 1989 Follow-Up Survey of Entering Class of 1985, 1989 Survey of College and University Faculty: Higher Education Research Institute, UCLA